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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,703	08/07/2001	Masashi Honda	016907-1252	8699
22428	7590	07/06/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			WORKU, NEGUSSIE	
			ART UNIT	PAPER NUMBER
			2626	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/922,703

Applicant(s)

HONDA, MASASHI

Examiner

Negussie Worku

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-14 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 08/07/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action.

## DETAILED ACTION

1. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, this action is made final; see MPEP § 706.07(a).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6-14, are rejected under 35 U.S.C. 102(e) as being anticipated by Moro (USP 6,047,092)

With respect to claim 1, Moro discloses an image forming apparatus (as shown in fig 1) comprising: scanner section (scanner section 4 of fig 3) which reads a document a main scanning direction and in a sub-scanning direction to provide image data indicating a density of each pixel within a document image for each image line the main

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scanning direction, see (col.6, lines –39-53); storing section (RAM 102 and 101 of fig 2) which stores the image data provided from the scanner section a memory, see (col.10, lines 1-5); a setting section (density setting section 220 of fig 3) which sets the number of image lines for calculation used for calculation of reference values for density correction, see (col.12, lines 55-65); density histogram creating section (205 of fig 3, col.12, lines 35-40) which takes in the image data provided from the scanner (scanner 4 of fig 3) for each image line and creates a density histogram of the document data corresponding the number of image lines for calculation et by the setting section, see col.12, lines 55-65); correction reference value calculating section (206 of fig 3) which calculates set correction reference values for a pixel density correction, see col.12, lines 36-42), using the density histogram created in the density histogram creating section (205 of fig 3, see col.12, lines 35-40); a pixel density correcting section (207 of fig 3, col.12, lines 35-40), which reads out the image data stored in the memory (memory 101 and 102 of fig 2) and performs correction of a pixel density indicated by the image data on all the read image data using the set of correction reference values calculated in the correction reference value calculating section (206 of fig 3, col.11, lines 12-15); and image forming means (fig 1 and 2 shows the mage forming apparatus having the printer section 6 of fig 2) which forms an image from the pixel density corrected in the pixel density correcting section (207 of fig 3, see col.12, lines 35-40).

With respect to claim 2, Moro discloses the apparatus (as shown in fig 1-3) wherein the number of image lines for calculation set by the setting section (density

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setting section 220 of fig 3) is equal to or less than the of all image lines of all image lines document image read out from the scanner section, (the image data read by scanner and stored in memory 101 and 102 of fig 2, see col.10, lines 1-5)

With respect to claim 3, Moro discloses an apparatus (as shown in fig 1-4), wherein the storing section (memory 101 and 102 of fig 2) starts reading out (scanner CPU 100 of fig 2 a means of read out data) of data when data corresponding to the number of image lines, see (col.12, lines 60-65) for calculation set by the setting section (density setting section 220 of fig 3) has been stored in memory (memory 101 and 101, see col.10, lines 1-5).

With respect to claim 4, Moro discloses an apparatus (as shown in fig 1-4), wherein the density histogram creating section (histogram producing section 205 of fig 3) has means which keeps a total data amount density histogram constant irrespective of the number of image lines taken in, see (col.12, lines 60-65, histogram of each scanning line).

With respect to claim 6, Moro discloses an image forming apparatus (as shown in fig 1) comprising: storing section (RAM 102 and 101 of fig 2) which stores the image data provided from the scanner section a memory, see (col.10, lines 1-5); a setting section (density setting section 220 of fig 3) which sets the number of image lines for calculation used for calculation of reference values for density correction, see (col.12,

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lines 55-65); histogram creating section (205 of fig 3, col.12, lines 35-40) which takes in the image data indicating the density of each pixel with in a document image and creates a density histogram (histogram gram producing section 205 of fig 3) of the document image on the basis of image data corresponding to the number of image lines for calculation set by the setting section (220 of fig 3, see col.12, lines 60-65); a correction reference value calculating section (206 of fig 3) which calculates set correction reference values for a pixel density correction, see col.12, lines 36-42), using the density histogram created in the density histogram creating section (205 of fig 3, see col.12, lines 35-40); a pixel density correcting section (207 of fig 3, col.12, lines 35-40), which reads out the image data stored in the memory (memory 101 and 102 of fig 2) and performs correction of a pixel density indicated by the image data on all the read image data using the set of correction reference values calculated in the correction reference value calculating section (206 of fig 3, col.11, lines 12-15).

With respect to claim 7, Moro discloses the apparatus (as shown in fig 1-3) wherein the number of image lines for calculation set by the setting section (density setting section 220 of fig 3) is equal to or less than the of all image lines of all image lines document image read out from the scanner section, (the image data read by scanner and stored in memory 101 and 102 of fig 2, see col.10, lines 1-5).

With respect to claim 8, Moro discloses an apparatus (as shown in fig 1-4), wherein the storing section (memory 101 and 102 of fig 2) starts reading out (scanner

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CPU 100 of fig 2 a means of read out data) of data when data corresponding to the number of image lines, see (col.12, lines 60-65) for calculation set by the setting section (density setting section 220 of fig 3) has been stored the in memory (memory 101 and 101, see col.10, lines 1-5).

With respect to claim 9, Moro discloses an apparatus (as shown in fig 1-4), wherein the density histogram creating section (histogram producing section 205 of fig 3) has means which keeps a total data amount density histogram constant irrespective of the number of image lines taken in, see (col.12, lines 60-65, histogram of each scanning line).

With respect to claim 10, Moro discloses an image forming apparatus (as shown in fig 1) comprising: storing image data (RAM 102 and 101 of fig 2) for each image line, the image data indicating a density of each pixel within a document image into memory (102 and 101 of fig 2); a setting the number of image lines for calculation used for calculating of reference values for density correction, (density setting section 220 of fig 3, which sets the number of image lines for calculation used for calculation of reference values for density correction, see (col.12, lines 55-65); taking in the image data indicating the density of each pixel with in a document image and creates a density histogram of the document image on the basis of image data corresponding to the number of image lines for calculation set by the setting step (histogram gram producing section 205 of fig 3, produce the document image on the basis of image data

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corresponding to the number of image lines for calculation set by the setting section (220 of fig 3, see col.12, lines 60-65); calculating a set of correction reference values for pixel density correction using the density histogram, (a correction reference value calculating section 206 of fig 3, which calculates set correction reference values for a pixel density correction, see col.12, lines 36-42); and reading image data stored in the memory to correct a pixel density indicated by the image data regarding all the image data read out using the set of correction reference values, (scanner CPU100 of fig 2, reads image data stored in memory 102, through processor 96 of fig 3 to the correction value calculating section 206 of fig 3, see col.11, lines 12-15).

With respect to claim 11, Moro discloses the apparatus (as shown in fig 1-3) wherein the number of image lines for calculation set by the setting section (density setting section 220 of fig 3) is equal to or less than the of all image lines of all image lines document image read out from the scanner section, (the image data red by scanner and stored in memory 101 and 102 of fig 2, see col.10, lines 1-5).

With respect to claim 12, Moro discloses the apparatus (as shown in fig 1-4) wherein the respective pixel density for all the image data corresponding to the document image is corrected by pixel density correction section (correction section 206 of fig 3) using only the set of correction reference value (reference value produced by calculating section 206 of fig 3, see col.12, lines 36-42).



With respect to claim 13, Moro discloses the apparatus (as shown in fig 1-4) wherein the respective pixel density for all the image data corresponding to the document image is corrected by pixel density correction section (correction section 206 of fig 3) using only the set of correction reference value (reference value produced by calculating section 206 of fig 3, see col.12, lines 36-42).

With respect to claim 14, Moro discloses the apparatus (as shown in fig 1-4) wherein the respective pixel density for all the image data corresponding to the document image is corrected by pixel density correction section (correction section 206 of fig 3) using only the set of correction reference value (reference value produced by calculating section 206 of fig 3, see col.12, lines 36-42).

***Claims objected to having allowable subject matter***

4. Claim 5, is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 5, the prior art does not teach or disclose the apparatus, wherein the correction reference value calculating section comprises detecting section which detects two representative densities ( $D_b$ ,  $D_w$ ) of a background and a character of the document from the density histogram created by the density histogram creating section; and the pixel density correcting section corrects the input pixel density according to the following equation.  $D_{sub.N} = (D_{sub.I} - D_{sub.W}) * FF[H] / (D_{sub.B} - D_{sub-}$

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.W) where  $D_{sub.I}$  is an input pixel density,  $D_{sub.W}$  is a representative background density,  $D_{sub.B}$  is a representative character density, FFh is the maximum density indicated by hexadecimal number, and  $D_{sub.N}$  is a corrected pixel density.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 305-5441. The examiner can normally be reached on 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 703-305-4863. The fax phone

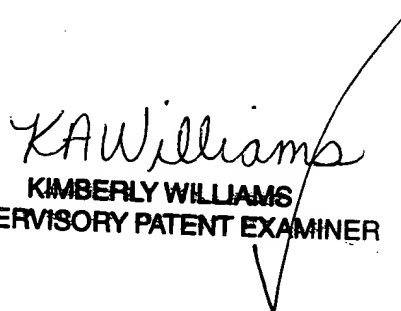
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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Negussie Worku  
Patent Examiner  
Art Unit 2626  
June 18, 2005



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KIMBERLY WILLIAMS  
SUPERVISORY PATENT EXAMINER